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Application No. 10/825,139
Amendment dated July 18, 2005
Reply to Office Action of February 17, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application.

Listing of Claims

Claim 1. (Currently Amended) A non-intrusive device for allowing spectrum analysis of a confined process stream through a light-transmitting conduit section of a process line, comprising a clip adapted to be externally mounted on the light-transmitting conduit section, said clip being at least partly made of a light-transmitting material, an input fiber optic cable connectable to said clip for directing a beam of light from a source of light transversally through the conduit section, an output fiber optic cable connectable to said clip for transmitting light from the conduit section to a light-receiving sensor and connectable to a source of light to direct a beam of light transversally through the conduit section, wherein said light transmitting material is selected from a group consisting of: near-infrared transmitting material and infrared transmitting material, and wherein said clip includes a hollow body housing at least one optical element, the optical element focussing the light transmitted across the conduit section into the output fiber optic cable said hollow body defining a peripheral open ended slot for receiving the light transmitting conduit section of the process line.

Claim 2. (Original) A non-intrusive device as defined in claim 1, wherein said clip is adapted to be releasably secured about the light-transmitting conduit section.

Claim 3. (Original) A non-intrusive device as defined in claim 1, wherein said clip is adjustable so as to be securable on light-transmitting conduits having different cross-sectional dimensions.

Claim 4. (Currently Amended) A non-intrusive device as defined in claim 1, wherein said body defines a peripheral slot receives for receiving interchangeable conduit adapters adapted to grip conduits of different external diameters.

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Claim 5. (Original) A non-intrusive device as defined in claim 4, wherein said clip further includes a removable cover for maintaining a selected one of said interchangeable conduit adapters captive in said peripheral slot.

Claim 6. (Currently Amended) A non-intrusive device as defined in claim 1, wherein said body defines a peripheral slot has having walls made of a light-transmitting material.

Claim 7. (Currently Amended) A non-intrusive device as defined in claim 6, wherein said body has a first connector adapted to be connected to a the input fiber optic cable to direct the beam of light through said peripheral slot and through the light-transmitting conduit section on which the clip is mounted, and wherein said at least one optical element comprises a lens.

Claim 8. (Original) A non-intrusive device as defined in claim 7, wherein said body has a second connector adapted to be connected to a light-receiving sensor for receiving the light emanating from the process stream through the light-transmitting conduit and the peripheral slot of the clip.

Claim 9. (Currently Amended) A non-intrusive device as defined in claim 8, wherein said second connector is connectable to said light-receiving sensor via a ~~second~~ the output fiber optic cable.

Claim 10. (Currently Amended) A non-intrusive device as defined in claim 1, wherein said body has a peripheral slot ~~defines~~ defining an optical path therethrough for receiving and conducting the beam of light through the light-transmitting conduit section of the process line, said at least one optical element collecting the light transmitted through the conduit section.

Claim 11. (Currently Amended) A non-intrusive device as defined in claim 10, wherein a conduit adapter is removably installed in said ~~open-ended~~ slot, said conduit adapter having a base wall from which extends a pair of spaced-apart conduit gripping arms adapted to receive

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therebetween the light-transmitting conduit section, wherein said conduit adapter is at least partly made of a light-transmitting material.

Claim 12. (Currently Amended) A conduit-mounted light-transmitting device in combination with a light-transmitting conduit section mounted in a process line for allowing optical analysis of a substance in the process line, the conduit-mounted light-transmitting device comprising a clip detachably securable about the conduit section, said clip defining an optical path intersecting the conduit section when said clip is secured thereabout, wherein said clip has a substantially hollow body having a conduit engaging section by which said body is releasably mounted directly on the light-transmitting conduit section, said optical path extending through said conduit engaging section for receiving and conducting a beam of light through the light-transmitting conduit section, and at least one optical element housed within said body for collecting the light transmitted through the conduit section, said optical element focussing the transmitted light into an output fiber optic cable removably coupled to the clip via a connector provided on said body.

Claim 13. (Original) A combination as defined in claim 12, wherein said conduit engaging section includes an open ended slot defined in one face of the body, and a conduit adapter removably installed in said open ended slot, said conduit adapter having a base wall from which extends a pair of spaced-apart conduit gripping arms for receiving therebetween the light-transmitting conduit section, wherein said conduit adapter is at least partly made of a light-transmitting material.

Claim 14. (Currently Amended) A combination as defined on claim 12, wherein said body has a first connector adapted to be connected to a an input fiber optic cable to direct a beam of light through said conduit engaging section and through the light-transmitting conduit section on which the clip is mounted.

Claim 15. (Cancelled)

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Claim 16. (Original) A combination as defined in claim 12, wherein light-transmitting material is selected from a group consisting of: near infrared transmitting material and infrared transmitting material.

Claim 17. (Original) A combination as defined in claim 14, wherein said clip includes a body having a conduit-engaging section, said conduit engaging section being made of a light-transmitting material.

Claim 18. (Cancelled)

Claim 19. (Cancelled)

Claim 20. (Cancelled)